



**Massachusetts Department of Public Health**  
Division of Food and Drugs  
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## **Food Protection Program Policies, Procedures and Guidelines**

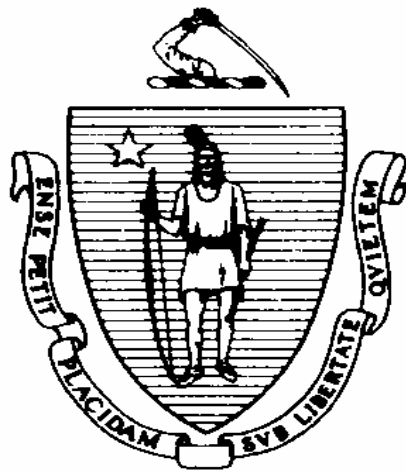
**Issue:** Shellstock Wet Storage

**No:** SF-01

**See Attached Guidelines**

**Guidelines for Obtaining a  
Permit for Onshore Wet Storage of Shellfish**

Massachusetts Department of Public Health  
Division of Food and Drugs  
Food Protection Program



The following is a guide to obtaining and maintaining a permit to operate a wet storage operation. For complete information regarding a wet storage operation, consult the current edition of the NSSP Shellfish Sanitation Model Ordinance and Massachusetts regulation 105 CMR 533.000.

## **ON-SHORE WET STORAGE OPERATION**

On-shore wet storage operations shall utilize only shellstock harvested from areas classified as approved or conditionally approved. All shellstock harvested, identified and shipped to a wet storage operation shall be in accordance with the National Shellfish Sanitation Program's (NSSP) Shellfish Sanitation Model Ordinance (SSMO).

### **General Requirements**

1. A wet storage facility may store, condition, remove sand or add salt to shellstock.
2. Only wholesale dealers with a valid permit issued by the Division of Marine Fisheries (DMF) and the Department of Public Health (DPH), Division of Food and Drugs (DFD) may conduct wet storage activities in compliance with the provisions of a written approval granted by DFD.
3. While awaiting placement in a wet storage operation, shellstock shall be protected from physical, chemical or thermal conditions, which may compromise the shellstock's survival, quality or activity during wet storage. At a minimum, water shall meet the water quality standards established for approved area status.
4. Water quality shall be sufficient to minimize the potential for comprising the sanitary quality of the shellstock.
5. Approved dealers shall conduct annual evaluations of their operating plan and procedures.
6. Shellstock subjected to wet storage shall be harvested, identified and shipped according to established requirements.
7. Tags/Labels of product subject to wet storage shall include the statement: "This Product was in Wet Storage at (Facility Certification Number) from (Date) to (Date)".
8. All dealers conducting wet storage and shellstock shipping shall:
  - have an operation plan approved by the Division of Food and Drugs describing all plans for construction or remodeling and how product labeling practices will assure that shellstock can be traced to its source;
  - meet all requirements for shellstock identification; and
  - have written recall procedures.
9. A wet storage dealer shall maintain complete and accurate records to enable a lot of shellstock to be traced back to the wet storage location, the harvest date and harvest area. Records must be maintained for at least:
  - 90 days from the date shellstock are removed from wet storage; and
  - 120 days from the date shellstock are removed from wet storage where the state of origin identification has changed.
10. For initial permitting of a wet storage operation, the dealer shall provide the Division of Food and Drugs the following information:

- a narrative explaining the purpose for the wet storage activities, such as holding, conditioning, etc.;
  - a facility design plan;
  - water source approval documentation;
  - water treatment system description and maintenance plan;
  - Flow Chart identifying each step in the wet storage procedure;
  - design of wet storage tanks, including materials, plumbing, dimensions, and capacity;
  - description of cleaning procedures and cleaning schedule;
  - water testing protocol, including:
    - name and address of certified laboratory used for testing;
    - schedule for submitting samples to the laboratory, including who is responsible for obtaining samples and transporting samples to laboratory;
    - action plan for positive coliform samples;
    - laboratory notification procedures; and
    - dealer's recall procedures.
  - if a flow-through system is used:
    - describe the discharge system with a Flow Chart from intake to discharge; and
    - if discharged to public areas, provide copy of Discharge Approval from the Massachusetts Department of Environmental Protection
11. Where there is new construction or major remodeling of an existing operation, the following must be approved by the Division of Food and Drugs prior to beginning construction:
- a narrative explaining the purpose for the construction;
  - any species specific physiological factors that may affect design criteria;
  - a facility plan design;
  - a water quantity and source plan; and
  - details regarding water treatment systems.

### **Operation Specifications**

Each onshore wet storage operation shall meet the following design, construction, and operating requirements:

#### **A. General Operational Procedures**

1. All activities shall be protected against entry of birds, animals and vermin.
2. Storage tanks are fabricated of safe, easily cleanable materials:
  - constructed for easy cleaning, inspection and are self-draining and made from non-toxic, corrosion resistant materials; and
  - plumbing can be easily cleaned and sanitized on a regular basis.
3. There shall be adequate clearance between shellstock and the bottom of the tank.
4. Individual shellstock containers shall allow for water flow-through.

#### **B. Building Specifications**

1. Floors shall be:
  - constructed of hard, smooth, easily cleanable materials and in good repair;

- impervious and corrosion resistant;
  - graded for drainage;
  - free from cracks; and
  - sealed junctions between floors and walls.
2. Wall and ceilings shall be:
    - constructed of easily cleanable, corrosion resistant, impervious and light colored and in good repair.
  3. Lighting shall be:
    - sufficient for good manufacturing practices; and
    - lights in work/storage areas are of a safety type or protected to prevent food contamination in case of breakage.
  4. Outdoor Tank Operation shall include:
    - tank covers must be used;
    - constructed of a light colored material;
    - can prevent entry of birds, animals or vermin, and
    - remain closed while system is in operation.

## **Water Supply**

### **A. General Requirements**

1. The water supply must be potable.
2. The facility must be provided with hot and cold running water at all sinks.
3. Surface source water quality prior to treatment must meet, at a minimum, bacteriological standards for an approved area.
4. Well water as a source for wet storage shall meet the bacteriological standards for an approved area and be sampled prior to use, every six months while in use, and after the supply has been repaired and disinfected.
5. A water supply sampling schedule shall be included in the operating procedures and water shall be tested according to the schedule.
6. The certified laboratory or a third party approved by the Division shall collect water supply samples.
7. Results of water samples and other tests to determine water suitability shall be maintained for at least two (2) years.
8. Disinfection or other water treatment activities cannot leave residues that are not Generally Recognized as Safe (GRAS).
9. Disinfected water entering the wet storage tanks shall have no detectable levels of the coliform group as measured by a method approved by the Department:
  - if a single sample shows positive, daily sampling shall be immediately instituted until problem is eliminated; and
  - after problem is eliminated, the effectiveness of the correction shall be shown on the first operating day following correction through the immediate collection, within 24 hours, of a set of three samples of disinfected water and one sample of the source water prior to disinfection.
10. Water disinfected by ultra-violet treatment shall not have a turbidity value exceeding 20 nephelometric turbidity units (NTU's).

11. Disinfection units shall be cleaned and serviced as frequently as necessary to assure effective water treatment.

**B. Continuous Flow-through System**

1. Water utilized from a harvest area classified as "Approved" may be used without disinfection provided that the nearshore water source used for supplying the system meets the approved classification bacteriological criteria.
2. Water utilized from an approved well source may be used without disinfection provided the source water meets the approved classification bacteriological criteria and is tested in accordance with (A)(4) above.

**C. Recirculating Water System**

1. All water, regardless of source, used in a recirculating water system shall be required to pass through a disinfection system prior to entering the wet storage tanks.
2. A study shall be required to demonstrate that the disinfection system for the system will consistently produce water that tests negative for the coliform group under normal operating conditions. The study shall include:
  - for certified, interstate shippers five sets of three samples from each disinfection unit collected for five consecutive days at the outlet from the disinfection unit or at the inlet to at least one of the wet storage tanks;
  - for non-certified wholesale dealers, five samples from the same run from the disinfection unit or at the inlet to at least one of the wet storage tanks;
  - five samples from the same run from the source water prior to disinfection;
  - certified dealers shall use NSSP recognized methods to analyze the samples to determine coliform levels, non-certified dealers shall use a method approved by the Department;
  - require all samples of disinfected water to be negative for the coliform group; and
  - be repeated if any sample of disinfected water during the study is positive for the coliform group.
3. Once sanctioned for use the system shall be sampled weekly to demonstrate that the disinfected water is negative for the coliform group.
4. When make-up water of more than 10 percent of the water volume is added, a set of three samples of disinfected water and one sample of the source water prior to disinfection shall be collected within a 24 hour period to reaffirm the ability of the system to produce water free from the coliform group.
5. When ultra-violet treatment is used as the water disinfectant, each time new ultraviolet bulbs are installed, a set of three samples of disinfected water and one sample of the source water prior to disinfection shall be collected within a 24 hour period to reaffirm the ability of the system to produce water free from the coliform group.

**Shellstock Handling**

1. Shellstock shall be culled and thoroughly washed with water from a source authorized by the Division of Food and Drugs prior to wet storage

- culling of mussels may be done after wet storage subject to permission of the Division of Food and Drugs
- 2. Commingling of different lots of shellfish shall be done in accordance with relevant NSSP, Model Ordinance or DPH policy guidelines.
- 3. Where multiple tank systems use a common water supply for bivalve mollusks and other species, wet storage water shall be disinfected prior to entering tanks containing the bivalve mollusks.